

Claims:

What is claimed is:

- 5 1. A security system for allowing a client to access a protected resource, comprising:

 an application interface mechanism for receiving an access request from a client application to access a protected resource, and communicating said access request to a security service;

- 10 a security service for making a decision to permit or deny said access request; and,

 a resource interface for communicating permitted access requests to said protected resource.

- 15 2. The security system of claim 1 wherein said application interface mechanism includes an application container for reading an application deployment description and registering said deployment description within the security service.

- 20 3. The security system of claim 2 wherein said application container is an Enterprise Java Beans container.

 4. The security system of claim 2 wherein said application container is a WebApp container.

- 25 5. The security system of claim 1 wherein said security service includes a plurality of access decision mechanisms for defining an access policy and for

determining a contributory decision to permit, deny, or abstain from said access request.

5 6. The security system of claim 5 wherein said security service further includes an access controller for transferring said access request to said plurality of access decision mechanisms, and for combining said contributory decisions into an overall decision by the security service to permit or deny said access request.

10 7. The security system of claim 5 wherein said access decisions represent a business function related access policy.

15 8. The security system of claim 5 wherein access decisions may be added to the security service to reflect changes in the access policy.

9. The security system of claim 5 wherein said access decision mechanisms are used to define an entitlement for said client to access said protected resource.

20 10. The security system of claim 5 wherein a deny or abstain by any one of said access decision mechanisms causes the security service to deny the access request.

25 11. The security system of claim 5 wherein an abstain by any one of said access decision mechanisms does not cause the security service to deny the access request.

12. The security system of claim 5 wherein said security service further includes an audit mechanism for auditing the determinations of said plurality of access requests.

5 13. The security system of claim 1 wherein said resource interface includes an interface mechanism to pass requests to or from a protected resource.

14. The security system of claim 13 wherein said interface mechanism includes a Java J2EE security interface.

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15. The security system of claim 13 wherein said interface mechanism includes a security provider interface.

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16. The security system of claim 13 wherein said interface mechanism is included as a plug-in in said resource interface.

17. The security system of claim 1 wherein the security service further makes a decision on whether to permit or deny a response to said access request from said protected resource to said client.

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18. A method of allowing a client to access a protected resource, comprising:
receiving at an application interface mechanism an access request from a client application to access a protected resource and communicating said access request to a security service;

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making a decision at said security service to permit or deny said access request; and,

communicating via a resource interface a permitted access request to said protected resource.

19. The method of claim 18 wherein said application interface mechanism includes an application container for reading an application deployment description and registering said deployment description within the security service.

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20. The method of claim 19 wherein said application container is an Enterprise Java Beans container.

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21. The method of claim 19 wherein said application container is a WebApp container.

22. The method of claim 18 further comprising:
defining an access policy via a plurality of access decision mechanisms within said security service; and,
15 determining at each access decision mechanism a contributory decision to permit, deny, or abstain from said access request.

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23. The method of claim 22 further comprising:
transferring via an access controller said access request to said plurality
20 of access decision mechanisms, and combining said contributory decisions into an overall decision by the security service to permit or deny said access request.

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24. The method of claim 22 wherein said access decisions represent a business function related access policy.

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25. The method of claim 22 wherein access decisions may be added to the security service to reflect changes in the access policy.

26. The method of claim 22 further comprising:
using said access decision mechanisms to define an entitlement for said client to access said protected resource.

5 27. The method of claim 22 wherein a deny or abstain by any one of said access decision mechanisms causes the security service to deny the access request.

10 28. The method of claim 22 wherein an abstain by any one of said access decision mechanisms does not cause the security service to deny the access request.

15 29. The method of claim 22 further comprising:
auditing via an audit mechanism the determinations of said plurality of access requests.

20 30. The method of claim 18 wherein said step of communicating via a resource interface includes passing requests via an interface mechanism to or from a protected resource.

31. The method of claim 30 wherein said interface mechanism includes a Java J2EE security interface.

25 32. The method of claim 30 wherein said interface mechanism includes a security provider interface.

33. The method of claim 30 wherein said interface mechanism is included as a plug-in in said resource interface.

34. The method of claim 18 further comprising:
making a decision on whether to permit or deny a response to said
access request from said protected resource to said client.

5 35. A method for determining a user entitlement to access protected
resources in a secure environment, comprising:

receiving an access request from a user application to access a
protected resource

invoking a security service with said access request;

10 determining a user entitlement to access said protected resource;

making a decision at said security service based on said user entitlement
to permit or deny said access request; and,

the steps of either

15 (a) communicating a permitted access request to said protected
resource, or

(b) denying a denied access request to said protected resource.

36. The method of claim 35 wherein said entitlement determines the type of
access available to the user of said protected resource.

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37. The method of claim 36 wherein said type of access includes any of view,
modify, delete, or copy, any part or all of said protected resource.

25 38. The method of claim 35 wherein information about said user entitlement
can be communicated from a first security realm to a second security realm.

39. The method of claim 38 wherein additional information from a first security
realm can be used to modify the user entitlement, prior to communicating said

information about said user entitlement from said first security realm to said second security realm.

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